Defense Information Infrastructure (DII)

Common Operating Environment (COE)

Software Version Description (SVD) for Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1)

Document Version 1.0

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Prepared for:

Defense Information Systems Agency

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1. Scope

1.1 Identification

This Software Version Description (SVD) describes the Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1). The DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1) is intended to be used on Sun hardware running the Solaris 2.5.1 Operating System.

The DII COE Kernel is a Government off-the-shelf (GOTS) package that includes both GOTS and Commercial off-the-shelf (COTS) software, as described in Section 1.2, *System Overview*.

NOTE: Throughout this document, Courier font is used to indicate entries to be typed at the keyboard, UNIX commands, file and directory names, and screen text. For example:

The file is located in the DII_DEV directory.

1.2 System Overview

DII COE will normally make available a large number of segments, not all of which are required for every application. The DII COE Kernel is the minimum set of software required on every workstation regardless of how the workstation will be used. These components include the operating system and windowing services, as well as external environment interfaces. The DII COE Kernel for Solaris 2.5.1 includes the following components:

- C Operating System (installed before the DII COE Kernel)
- C System Administration function
- C Security Administration function
- C Runtime tools
- C COTS software (windowing environment)
- C GOTS software.

These components can be broken down into the following features:

Operating System

Solaris 2.5.1 Operating System, including HP Common Desktop Environment (CDE). Refer to the *DII COE Kernel Installation Guide* for information about installing the Solaris 2.5.1 Operating System.

System Administration Function

The System Administration function is used to provide the capability to configure, manage, and use printer services from a DII workstation; close windows; reboot or shut down the system, mount file systems, and format hard drives; load or install segments, including distributions; and change machine ID, set system time, configure a workstation as either a DNS client or a server, set routing configuration, and configure Network Information Service (NIS). The system administrator's account group sets the system administrator's environment to execute the functions listed above. Refer to the *DII COE System Administrator's Guide* for more information about System Administration functionality.

Security Administration Function

The Security Manager Administration function provides the ability for authorized users to create, delete, and maintain user accounts and UNIX groups, as well as to define *profiles*, which provide users with easy access to the executables and icons they need to perform their duties. (Profiles provide a mechanism by which a security administrator can group sets of users, often by their job responsibilities, to appropriate applications.) In addition, the Security Manager Administration function provides the ability to monitor and manage the growth of the audit log files, which record user access (e.g., logging in, logging out) to the system. Refer to the *DII COE User's Manual for Kernel Version 3.2.0.0 Patch 2 Security Administration* and the *DII COE Version 3.2.0.0 Security Manager's Guide* for more information about Security Administration functionality.

Runtime Tools

Runtime tools are used to support the segment installation process. The following runtime tools are included on the DII COE Kernel Version 3.2.0.0 Patch 2 tape. All of the tools can be run from the command line, and some can be run from other code using published Application Programmer Interfaces (APIs). The COEInstaller tool can also be run from the System Administration pull-down menu. Refer to the *DII COE Programmers Manual* and the *DII COE API Reference Guide* for more information about these tools and their functionality.

- COEAskUser Version 1.0.0.9—Displays a message to the user and expects the user to choose one of two buttons in response. The COEAskUser tool can be called from anywhere.
- C COEFindSeg Version 1.0.0.8—Returns information about a requested segment.

- COEInstaller Version 1.0.0.12—Displays a list of segments that may be installed from tape, disk, or other electronic media. The COEInstaller tool can be run from the command line, as well as from the System Administration pull-down menu.
- COEInstError Version 1.0.0.9—Displays an error message to the user. It can be run from the command line, but it is most often called from within a PreInstall, PostInstall, or DEINSTALL script.
- C COEMsg Version 1.0.0.9—Displays a message to the user from within a PreInstall, PostInstall, or DEINSTALL script.
- C COEPrompt Version 1.0.0.9—Displays a message to the user and expects the user to enter a response from within a PreInstall, PostInstall, or DEINSTALL script.
- COEPromptPasswd Version 1.0.0.9—Displays a message to the user and waits for the user to enter a password. It can be run from the command line, but it is most often called from within a PreInstall or PostInstall script.
- C COEUpdateHome Version 1.0.0.6—Updates the home environment within a script file to point to where a segment actually was installed.

COTS Software

The following COTS software helps to provide the foundation of the DII COE software environment:

- C CDE
- C Motif Version 1.2.6
- C X Windows Version X11R6.

GOTS Software

The following GOTS software also helps to provide the foundation of the DII COE software environment. Refer to the DII COE System Administrator's Guide and the DII COE User's Manual for Kernel Version 3.2.0.0 Patch 2 Security Administration for more information about GOTS software.

- C CSELCK (Deadman) Version 1.0.0.2 is used to provide a screen lock capability as a security feature.
- C CSECON (Console Window) Version 1.0.0.2 is used to provide a secure console window for displaying output written to stdout.
- C CSEXDM (X Display Manager) Version 1.1.0.2 provides a secure login screen.
- C **CSEPAS** (**Password**) Version 1.0.0.2 allows a user to change his or her own password and allows the security administrator to change other users' passwords.

C **Accounts and Profiles Subsystem** is used to add, modify, and delete local and global user accounts, profiles, and groups.

Reporting Problems

To receive immediate assistance with a problem or to report a problem, call the DII COE Hotline at (703) 735-8681 (DSN 653-8681) between the hours of 9:00 a.m. to 5:00 p.m. Eastern Standard Time. You can also send a facsimile at (703) 735-3080 (DSN 653-3080), send an email message to hotlinec@ncr.disa.mil, or look on the DII COE Hotline Web site at the following URL: http://spider.osfl.disa.mil/dii/hotline/index.html. The DII COE Hotline is located at the Operational Support Facility (OSF) in Sterling, Virginia.

1.3 Product Information

Product Qualification: The DII COE Kernel Version 3.2.0.0 Patch 2 was validated

and accepted by the INRI Systems Engineering Group in accordance with the *Defense Information Infrastructure* (DII) Common Operating Environment (COE) Software Test Plan (STP) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit Version 3.2.0.2, Document Control No. DII.3200.HPSOL.P2.STP-1, November 18, 1997. The qualification that the segment is ready for delivery was issued at the INRI DII COE Kernel Version 3.2.0.0 Patch 2

Delivery Readiness Review on November 17, 1997.

Product Restrictions: Copyright, Inter-National Research Institute, Inc. 1997, All

Rights Reserved. This material may be reproduced by or for the U.S. Government pursuant to the copyright license under the clause at DFARS 252.227-703 (OCT 1988). Licenses required are Motif 1.2.6, X11R6, Solaris 2.5.1 and TED 4.2. No freeware (except X11R6) or shareware is

included.

Product Dependencies: The DII COE Kernel Version 3.2.0.0 Patch 2 requires the

Solaris 2.5.1 Operating System. No implementation constraints or limitations on system configuration apply.

2. Referenced Documents

The following documents are referenced in this Software Version Description (SVD):

- C DII.3200.Sol251.P1.IP-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Installation Procedures for Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.P1.AG-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Kernel Patch 1 System Administrator's Manual (Solaris 2.5.1), September 26, 1997
- C DII.3200.Sol251.Kernel.P2.UM-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) User's Manual for Kernel Version 3.2.0.0 Patch 2 Security Administration (Solaris 2.5.1), November 18, 1997
- C DII.3200.Sol251.SMG-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Security Manager's Guide (Solaris 2.5.1), July 25, 1997
- C DII.3200.Sol251.PM-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Kernel Version 3.2.0.0 Patch 1 and Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1), September 26, 1997
- C DII.3200.Sol251.RG-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Application Programmer Interface (API) Reference Guide (Solaris 2.5.1), July 25, 1997
- C DII.3200.HPSOL.P2.STP-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Plan for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP-UX 10.20/Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.Kernel.VDD-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Version Description Document for the Kernel (Solaris 2.5.1), July 25, 1997
- C DII.3200.Sol251.KernelP1.VDD-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Version Description Document for the Kernel Patch 1 (Solaris 2.5.1), September 26, 1997
- C DII.3200.HPSOL.Helper.PM-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Helper Function (HP-UX 10.20/Solaris 2.5.1), September 26, 1997.

3. Version Description

3.1 Inventory of Materials Released

<u>Magnetic media</u>: Two 8mm tapes consisting of a relative tar of the DII COE Kernel Version 3.2.0.0 Patch 2, (Solaris 2.5.1).

<u>Soft-copy Documentation</u>: A 3.5" floppy diskette (WordPerfect 6.0 for Windows format) for each of the following documents:

- C DII.3200.Sol251.Kernel.P2.SVD-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Version Description (SVD) for Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.Kernel.P2.IP-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Installation Procedures (IP) for Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.HPSOL.P2.STP-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Plan (STP) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP 10.20/Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.HPSOL.P2.STD-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Description (STD) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP 10.20/Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.HPSOL.P2.STR-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) Software Test Report (STR) for Kernel Version 3.2.0.0 Patch 2 and Developer's Toolkit 3.2.0.2 (HP 10.20/Solaris 2.5.1), Document Version 1.0, November 18, 1997
- C DII.3200.Sol251.Kernel.P2.UM-1, Defense Information Infrastructure (DII) Common Operating Environment (COE) User's Manual (UM) for Kernel Version 3.2.0.0 Patch 2 Security Administration (Solaris 2.5.1), November 18, 1997.

<u>Hard-copy Documentation</u>: Two hard copies of the aforementioned documents.

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NOTE: Although not part of this Kernel delivery, the *Defense Information Infrastructure (DII)* Common Operating Environment (COE) Version 3.2.0.0 Kernel Patch 1 System Administrator's Manual (Solaris 2.5.1), Document Control No. DII.3200.Sol251.P1.AG-1, September 26, 1997, provides relevant information on how to use the COEInstaller. Also, the Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Kernel Version 3.2.0.0 Patch 1 and Developer's Toolkit Version 3.2.0.1 (Solaris 2.5.1), Document Control No. DII.3200.Sol251.P1.PM-1, September 26, 1997, and Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Application Programmer Interface (API) Reference Guide (Solaris 2.5.1), Document Control No. DII.3200.Sol251.RG-1, July 25, 1997, provide relevant information on how to use the developer's tools. Additionally, *Defense Information* Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Security Manager's Guide (Solaris 2.5.1), Document Control No. DII.3200.Sol251.SMG-1, July 25, 1997, details Security Administration functionality. For additional information on software changes and known problems and errors see the Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Version Description Document for the Kernel (Solaris 2.5.1), Document Control Number DII.3200.Sol251.Kernel.VDD-1, July 25, 1997, and Defense Information Infrastructure (DII) Common Operating Environment (COE) *Version 3.2.0.0 Version Description Document for the Kernel Patch 1 (Solaris 2.5.1)*, Document Control No. DII.3200.Sol251.KernelP1.VDD-1, September 26, 1997.

3.2 Inventory of Software Contents

The following files, which make up the Kernel Version 3.2.0.0 Patch 2, are dated November 13, 1997.

File Name, Version

COE.P2/data:

COEAskUser*, 1.0.0.9

COECheckSessions*

COECloseSession*

COEGetRoleDir*

COEInstError*, 1.0.0.9

COEInstaller*, 1.0.0.12

COELFMConfig.dat

COELFMCron.dat

COELFMDefaults.dat

COELFManager*

COELFMon.dat

COEMenus*

COEMsg*, 1.0.0.9

COEPrintServer*

COEProcMgr*

COEPrompt*, 1.0.0.9

COEPromptPasswd*, 1.0.0.9

File Name, Version

COEPrtConfig*

COESecLevel*

COESession*

COEStartBoot*

COEStartProcMgr*

COEStartSession*

InstallerStatus*

RemoveLFM*

SADiskMgr*

SAnisAddClient.csh*

SAnisinitialize.csh*

SAnisremove.csh*

SSOAuditLog*

SSOLogIcon

SetUpLFM*

modify_group*

nis dbmod*

xutil.sh*

COE.P2/data/dii33_sol_em:

convertUserProfile*

reset_sessionetc*

unconvertUserProfile*

update_sessionetc*

COE.P2/data/dii33_sol_em/COECDE:

profiles.dt

COE.P2/data/dii33_sol_em/COEUserMgmt:

COEUpdateInstall*

COE_Call_UP_Assume*

COE_Release_Profiles*

COE_Update_Db.ksh*

COE_add_app_data*

COE_add_profile_data*

COE_add_profile_reserved_data*

COE_add_user_data*

COE_add_user_reserved_data*

 $COE_assign_app_to_profile*$

COE_assign_secman_to_sso_default*

COE_assign_user_to_profile*

COE_change_profiles*

COE_clear_profile_lock*

COE_create_profile*

COE_deassign_app_from_profile*

COE_deassign_user_from_profile*

COE_delete_a_lock.ksh*

COE_delete_all_locks*

File Name, Version

COE_delete_app_data*

COE_delete_profile_data*

COE_delete_profile_reserved_data*

COE_delete_user_data*

COE_delete_user_reserved_data*

COE_get_app_data*

COE_get_current_profiles*

COE_get_error_string*

COE_get_profile_data*

COE_get_profileapp_data*

COE_get_user_data*

 $COE_get_user_id*$

COE_get_user_profile_data*

COE_pw_encrypt*

COE_query_profile_lock*

COE_reload_apps_db*

COE_set_current_profiles*

COE_set_profile_lock*

COE_xterm*

EM_pixel_reader*

InitDb.sh*

profile_config.dtksh*

profile_select*

COE.P2/data/dii33 sol em/COEdata:

profile_config.hlp

profile_select.hlp

ps_lock_err.hlp

ps_noprof_err.hlp

ps_rslts_err.hlp

COE.P2/data/dii33 sol em/DAZbin:

DAZ_Add_Domain*

DAZ Add Profile*

DAZ_Assume_Profile*

DAZ_Clear_Profile_Lock*

 $DAZ_Deassume_Profile*$

DAZ_Delete_Domain*

DAZ_Delete_Profile*

 $DAZ_Get_Profile_Data*$

DAZ_Get_Profile_Lock_Status*

DAZ_Get_Profile_Users*

DAZ_Library_Version*

daz_restart*

COE.P2/data/dii33_sol_em/SecAdmbin:

COE_Process_App*

COE_Process_User*

File Name, Version

COE_export*

COE_import*

COE_remote_security*

COE_run_security*

EM_prompt_security*

EM_security_manager*

EM_set_security_env

COE.P2/data/dii33_sol_em/SecAdmscripts:

Add_New_User*

Delete_User*

Modify_User*

add_account*

add_group*

add_usergroup*

admin_profiles*

delete_account*

delete_group*

delete_groupuser*

delete_userfiles*

modify_group*

modify_nisuser*

nis_dbadd*

nis_dbcopy*

nis_dbdel*

nis_dbmake*

nis_dbmod*

nis_status*

COE.P2/data/dii33_sol_em/lib:

libdaz.so.0*

libdaz.so.1*

3.3 Changes Installed

3.3.1 DII COE Kernel Software Changes

3.3.1.1 DII COE Kernel Software Changes from Version 3.2.0.0 Patch 1 to Patch 2

The DII COE Version 3.2.0.0 Kernel Patch 2 for Solaris 2.5.1 encompasses the changes listed in the following table in order of INRI Number:

DII COE Version 3.2.0.0 Kernel Patch 2 (Solaris 2.5.1) Software Changes

Total Software Changes: [11]

INRI Number: RTO00001744

Agency Number: D70424

Short Description: COEPrompt can be terminated with a carriage return.

Long Description: The COEPrompt tool, at this time, can present a fairly dangerous situation in some instances. As with all DII Message tools, when they are displayed on the screen, they automatically become the active window. In many instances, the machine's operator is multitasking (i.e., running xterms, Segment Installer, Netscape, etc. concurrently) and is working specifically within a window. If the operator was working in an xterm and hit the <Enter> key, (meant for the Xterm) at the instant that a COEPrompt appeared on the screen, then the COEPrompt would assume that this keystroke (<Enter>) was the information that the operator meant to give. This can be fatal to some installs (i.e., Informix at the prompt for licensing information). It is recommended that the COEPrompt be terminated only by the operator's mouse choosing the "OK" button.

INRI Number: RTO00001829

Agency Number: D70562

Short Description: The Installation of an account group causes more than just the account group segment to be loaded.

Long Description: The installation of an account group causes more than just the account group segment to be loaded. It causes the account groups database to be updated and a default profile to be created in the /h/USERS/(global and =Local)/Profiles directory. However, the default profile is not created in the profiles database and hence requires manual creation, even though its directory is already created. Regardless of this dilemma, when the account group is de-installed, many residue components are left behind. The account group segment is removed and all data created by the segment is removed, but the DII COE leaves many of its created elements behind. For example:

- 1) The default profile and any derived profiles remain in the ...local/Profiles directory and also in the .../global/Profiles directory. The global area is more of an issue, but DII COE should build in a mechanism that would allow global profiles to be removed when the last account group segment instance is removed from the system
- 2) /h/COE/data/types/C/*.dt files, which are created for the account group segment, still exist
- 3) /h/COE/data/Local/ProfileList still contains profile information of the account group just removed. As a result of the residue, when the segment is reinstalled duplicate entries are made, in particular, duplicate entries to the LocalProfileList.

INRI Number: RTO00001834

Agency Number: D70421

Short Description: Receive a CoeInstaller segmentation fault when specifying a partial version in the [Requires] descriptor.

Long Description: A sample segment with a version number of 1.0.0.3 is loaded in the system. Its name is "Segment One" and its prefix is "One". A second segment states its dependency on the first in the (Requires) section of the seginfo file as shown: Segment One: One:/h/One:1.0

Attempting to load Segment Two results in segmentation fault. On a Solaris System (v3.0.0.3) without Kernel Patch 2, Segment Two will load from tape with the warning: CanInstall: ERROR, Bad Version Field: 1.0, use format x.x.x.x

Segment Two will not load from network; receive the warning "The required segment not found in disk." According to the I&RTS Rev 3.0, Section 3.1.1, Segment Version Numbers, Segment A may indicate that it requires Segment B, version 2.3 indicating that any maintenance release of Version 2.3 (e.g., 2.3.2.0, 2.3.1.2) is acceptable.

INRI Number: RTO00001846

Agency Number: D70571

Short Description: The Disk manager application as executed from the Network menu selection has two areas that need to be addressed.

Long Description: The Disk manager application as executed from the Network menu selection has two areas that need to be addressed:

- 1) When the exports option is selected, the dialog display that appears is not fully expanded. If a user did not realize that the window needed to be manually expanded, they would fail to enter all the required information.
- 2) The application allows a mount point to be unmounted; however, once unmounted the mount cannot be remounted via the application mount function because the button remains nonselectable. To remount the mount point, the user must do so via an xterm login.

INRI Number: RTO00001900

Agency Number: D70850

Short Description: Errors encountered on a parallel printer ceases printer functionality.

Long Description: When errors are encountered on a parallel printer, the error feedback causes problems such that the printer is no longer functional. Turning the printer on and off, rebooting the machines and deleting the printer altogether and adding it again using the GUI still does not correct the problem.

Also reference GSPR # D70768

INRI Number: RTO00001926

Agency Number: D70865

Short Description: COEInstError is not leading to halting of tool processing when run in PreInstall.

Long Description: COEInstError is not leading to halting of tool processing when run in PreInstall. For example, call COEInstError from within a segment's PreInstall script and then run COEInstaller or TestInstall. Despite the COEInstError, the segment is still installed. Note that COEInstError when run from PostInstall or DEINSTALL does lead to COEInstaller, TestInstall, and TestRemove not installing/deinstalling the segment. Also reference GSPR# D70783

INRI Number: RTO00002010

Agency Number: D70410

Short Description: Bad Information in banner.

Long Description: When executing the script, /h/COE/bin/COESecLevel to change the classification banner it was noticed that the selection of either TS or SCI change the banner to read TOP SECRET (SI/TK). This should not be the case for just a Top Secret Banner.

INRI Number: RTO00002035

Agency Number: None

Short Description: Creation of Log Manipulation Tools.

Long Description: Creation of Log Manipulation Tools. The user's audit logs on UNIX Workstations are becoming large enough that they are filling up the available partitioned disk space. The files are as follows: SOL, wtmp, wtmpx. utmp, utmpx and HP wtpm, btmp, utmp. A tool needs to be developed to allow for the deletion of these files.

INRI Number: RTO00002036

Agency Number: None

Short Description: Phase 2 of JPL's SecMan/Accts&Profiles (integration).

Long Description: Phase 2 of JPL's SecMan/Accts&Profiles (integration). JPL's Accounts and Profiles software

integration into the DII COE for 3.2P2 delivery.

INRI Number: RTO00002066

Agency Number: None

Short Description: Helper function not invoked for database descriptor.

Long Description: The "Database" Descriptor does not call the HelperFunction. VerifySeg displays an error

and does not invoke the helper function.

INRI Number: RTO00002067

Agency Number: None

Short Description: COEInstaller does not invoke Helper Functions during deinstall.

Long Description: COEInstaller does not invoke Helper Functions during deinstall. It should invoke Helper Functions with an undo when deinstalling segments.

Government Software Problem Report (GSPR) NOTES:

GSPR D70562 - Deinstallation of an account group segment will not remove derived profiles in the /h/USERS/global/Profiles directory. To remove these derived global profiles, the tool COERemoveGlobal must be executed from an xterm.

GSPR D70571 - The mount button will only be selectable if the file system is predefined in the/Platform/include/Config.h file. If the file system does not appear on the list, then the file system was not predefined. Since there is no way of knowing what the file system will be for a particular machine, the list of file system is very limited. Workaround: the user can mount the file system again by using the "MOUNT NEW" button without leaving the application.

GSPR D70865 - This has been fixed for the COEInstaller only, TestInstall remains unchanged. COEInstError does not lead to the halting of a segment installation/deinstallation during the manual execution of the developer's tools TestInstall or TestRemove This allows the developer to perform debugging after COEInstError has been run.

3.3.1.2 DII COE Kernel Software Changes Rolled Up from Version 3.2.0.0 Patch 1

The DII COE Kernel Version 3.2.0.0 Patch 2 also encompasses a roll-up of the following changes implemented in Kernel Version 3.2.0.0 Patch 1; these software changes are listed in order of INRI Number.

DII COE Version 3.2.0.0 Kernel Patch 1 (Solaris 2.5.1) Software Changes

Total Software Changes: [17]

INRI Number: RTO00001416

Agency Number: D70651

Short Description: Problem exiting the NIS configuration.

Long Description: The Network menu > Servers option > Set NIS option > Initialize NIS option does not provide the capability to exit the NIS configuration. The user had to exit the window using the Motif CLOSE (ALT-F4) option, which halted the process even though an entry "+" was still made in the /etc/group file. Because of this entry, attempts to perform an "su - 'user'" resulted in a "Bus error" message and an unsuccessful attempt to switch users. Although the Remove NIS option could have been used to undo the changes, a Cancel button should be added to the Set NIS option so the user can exit without making any changes. In addition, adding a Cancel button also would make the Set NIS option more consistent with other system windows.

INRI Number: RTO00001536

Agency Number: D70661

Short Description: The Add NIS Client option does not allow the user to exit the option without adding a NIS

Long Description: On Solaris, the Add NIS Client option does not allow the user to exit the option without adding a NIS client. (Note that leaving the window entries blank, however, does not appear to cause system problems.) The user should be able to exit the option without adding a NIS client.

INRI Number: RTO00001537

Agency Number: None.

Short Description: The Add NIS client option should present an error message if the user tries to add a

duplicate NIS client.

Long Description: The user should receive an error message when attempting to add a duplicate NIS client. Currently, the Add NIS client option continues without warning but does not appear to have any negative

results.

INRI Number: RTO00001539

Agency Number: D70341

Short Description: Patch segments cannot be installed from the network.

Long Description: Patch segments can be installed from tape but not from the network (NETWORK option in the Select Source window, Device panel). When attempting to install a patch from the network, the following error message appears: "Unable to get [VERSION] descriptor information. Couldn't get the patch number."

INRI Number: RTO00001541

Agency Number: D70665

Short Description: A window prompting the user to reboot the machine should appear after NIS+ client

initialization.

Long Description: A window with the message "Please reboot this machine" should appear after the user initializes a NIS+ client on Solaris and IBM. This window appears after NIS client initialization on HP.

INRI Number: RTO00001554

Agency Number: D70605

Short Description: The Process Manager does not run logout processes upon logout.

Long Description: The Process Manager does not run the commands in the session logout file upon logout. Instead, the commands are being run at the next login. This problem was tested as a basic JMCIS user. This

problem has no workaround.

INRI Number: RTO00001645

Agency Number: D70367

Short Description: The Reserved field of \$DISK is not working correctly.

Long Description: An ORACLE client segment was built with the following entry in the SegInfo file: \$DISK:5100:3000000. 300MB was to be reserved. Prior to installation, the Reserved field of the Available Disks panel in the COEInstaller window showed 291.33 MB for the targeted disk. After installation of the ORACLE Client segment, the "Reserved" field still showed 281.33 MB. Apparently, the Reserved field of \$DISK is not working correctly. 300MB should have been added to the 281.33MB value.

INRI Number: RTO00001646

Agency Number: D70368

Short Description: Multiple account groups cannot be specified.

Long Description: Page 5-94 of the I&RTS that the user may have "one or more \$SEGMENTS lines" in the SegName file, which would allow the segment to belong to more than one account group. It appears, however, that only the first \$SEGMENT is recognized when a segment is loaded.

INRI Number: RTO00001830

Agency Number: D70559

Short Description: The /rhosts file created during the addition of an NIS client to the NIS server is owned by root; it should be owned by secman.

Long Description: The /rhosts file, which is created in the secman home directory during the processing of adding a NIS client to the NIS server via the Network/NIS menu, is owned by root. This prevents it from being read. Ownership should be secman.

INRI Number: RTO00001831

Agency Number: D70558

Short Description: When removing NIS from a client via the Network/NIS menu, the /etc/nnswitch.conf is not updated to remove the NIS+ references.

Long Description: When removing NIS from a client via the Network/NIS menu, the /etc/nnswitch.conf is not updated to remove the NIS+ references.

INRI Number: RTO00001838

Agency Number: D70556

Short Description: The Menu bar and classification banner fail to appear on certain workstations when using a global account.

Long Description: The Menu bar and classification banner fail to appear when using a global account from a workstation that does not have the account group loaded and requires a menu option to be displayed. Although this error can be corrected by loading all account groups on every workstation, DII COE should not attempt to load a menu for which the data doesn't exist. Or, if the data is loaded, the menu bar and classification banner should not be terminated.

Also, when a global user logs onto a workstation (one that does not have all the applications that appear in the user's profile locally loaded) and selects an icon, the user should get an indication that the application is not available -- instead of nothing happening.

INRI Number: RTO00001839

Agency Number: D70551

Short Description: The ReqrdScripts fails to update the ./global/Profiles/<account group default when a new segment is loaded.

Long Description: The ReqrdScripts fails to update the ./global/Profiles/<account group default when a new segment is loaded. However, it updated the local/Profiles directory. This problem prevents an account group environment from being extended. Since the SA and SSO account groups cannot be modified, the extentions must be placed in the appropriate profiles directory.

Work-around: Source the /h/AcctGrp/<account group>/Scripts.cshrc.<extension> files instead. The global profiles then work since the SegInfo directive causes this area to be properly updated.

INRI Number: RTO00001863

Agency Number: D70568

Short Description: When initializing a NIS client via the Network>NIS menu, the hostname of the NIS server is required, not its IP address.

Long Description: When initializing an NIS client via the Network>NIS menu, the hostname of the NIS server is required, not its IP address. This requires that the NIS server hostname be added to the local /etc/hots file. Since usr/lib/nis/nisclient can accept either the NIS server hostname (-h option) or NIS server IP (-a option), the initialization should not require the sysadmin to edit the /etc/host file and should allow the entry of the IP address.

INRI Number: RTO00001882

Agency Number: None

Short Description: Enhance Initialize NIS option to provide COEMsg concerning need to update exports and mounts for global user creation.

Long Description: Upon successful completion of the NETWORK > SERVERS> SET NIS > INITIALIZE NIS option, a message window should provide direction for the System Administrator to update exports and mounts in order for global accounts and profiles to be utilized. Configuration of NIS or NIS+ does not automatically provide this capability. The user must ensure that:

- a) /h/USERS/global is properly exported on the master machine
- b) the client has mounted the master's /h/USERS/global
- c) the master needs to have its clients as trusted if options such as the Remote Security Manager are to be successfully run.

Providing this type of insight via an information message will assist in the end user being able to complete the necessary thread of creating global users.

INRI Number: RTO00001889

Agency Number: None

Short Description: For NIS Remove option, improper error message appears when the user answers NO to removing NIS.

Long Description: Upon selection of the Sysadmin option NETWORK > SERVERS > SET NIS > REMOVE NIS, the user is prompted "Do you wish to disable and remove NIS?" However, selection of the NO option results in the notification that NIS has been removed and the user should reboot. This error message is incorrect since the removal of NIS is halted and the user does not actually have to reboot the system.

INRI Number: RTO00002016

Agency Number: D70565

Short Description: Invalid file owner/group assignment.

Long Description: The owner/group settings on the dot files stored in the scripts directory in /h/USERS/(global or local/Profiles/profile name> directory have an owner/group setting that is unknown to the system. The DII COE should not allow uids and gids to be used which are not valid on the current system.

INRI Number: RTO00002017

Agency Number: D70552

Short Description: Menu items fail to execute.

Long Description: The SysAdm and TBMCS account groups both have menu bar items. When using global locking and global users and assigning both account groups to a single user (also assuring all groups have been assigned to the user), the menu bar selections may or may not work when both profiles are active. It turns out that in order to insure that the menu items are executable, you must select the profiles in a certain order when the profile selection window appears during user login. The user must first select the SA_Default and then the TBMCS Default to assure proper menu bar execution.

GSPR NOTE:

GSPR D70551 - This has been addressed for Security Administration and System Administration account groups. See *Notes* in the *DII COE Version 3.2.0.0 Version Description Document for the Kernel Patch 1* for details on how to extend the environment for global profiles with other account group types.

In addition, this delivery contains enhancements to the COEInstaller to support the Helper Function capability. See the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 Programmer's Manual for Helper Function* for additional information on Helper Function.

3.3.2 DII COE Kernel COTS and GOTS Software Changes

The DII COE Version 3.2.0.0 Kernel Patch 2 for Solaris 2.5.1 encompasses the following changes, listed in order of INRI Number:

DII COE Version 3.2.0.0 Kernel Patch 2 (Solaris 2.5.1) COTS/GOTS Software Changes

Total Software Changes: [14]

INRI Number: RTO30000182

Agency Number: D70397

Short Description: Profile Selection Window problem.

Long Description: When "Window MGR Close" is executed from the profile selection GUI dialog, the dialog

closes but the profile selection will never come up again.

INRI Number: RTO30000183

Agency Number: D70483

Short Description: Post Segment installation database question.

Long Description: The database installation window appears at the end of a segment installation. If the correct

responses are not enter, the system corrupts and must be reloaded. This is an intermittent problem.

INRI Number: RTO30000184

Agency Number: D70550

Short Description: Edit profile window is blank.

Long Description: When re-edition an existing profile to add new applications, occasionally the assigned

portion is blank.

INRI Number: RTO30000185

Agency Number: D70692

Short Description: Security Manager failed execution problem.

Long Description: Security Manager Remote does not run on either the master or the client. The following

error is received: "Failed to start security manager".

INRI Number: RTO30000186

Agency Number: D70892

Short Description: Deletion of system users and groups.

Long Description: User can delete (but should not be able to) system level groups, such as admin and other,

from the Security Manager program.

INRI Number: RTO30000187

Agency Number: D70954

Short Description: Lost changes to a users profile.

Long Description: When modifying a users profile via the security manager, the modifications do not actually

stay in effect.

INRI Number: RTO30000188

Agency Number: D70957

Short Description: Profile window needs to refresh.

Long Description: When making changes within the profile window, the window does not refresh and there is

not a refresh button.

INRI Number: RTO30000189

Agency Number: D70989

Short Description: Deleting a profile with special characters produces unexpected results.

Long Description: Deleting a profile with special characters produces unexpected results.

INRI Number: RTO30000190

Agency Number: D70995

Short Description: Reassigning profiles to user accounts is not working properly.

Long Description: Reassigning profiles to user accounts is not working properly.

INRI Number: RTO30000191

Agency Number: D70998

Short Description: Deleting system user accounts allowed.

Long Description: Deleting system user accounts allowed, but it should not be.

INRI Number: RTO30000192

Agency Number: None

Short Description: When modifying any user, profile, or group, using the top pull-down menu option, the

window disappears.

Long Description: When modifying any user, profile, or group, using the top pull-down menu option, the

window disappears.

INRI Number: RTO30000193

Agency Number: None

Short Description: When changing user passwords, the input field is not overwritten with asterisks.

Long Description: When changing user passwords, the input field is not overwritten with asterisks.

INRI Number: RTO30000195

Agency Number: D70840

Short Description: Use of sysadmin login and SA_Default results in no SA Default menu items and SA

Default icon launch failure after segment load.

Long Description: Logging in as sysadmin and using SA_Default profile results in no SA Default menu items and inability launch SA Default icons after several segment installs and deinstalls. Either some segments loaded on the system or some combination of install/deinstall actions was able to corrupt the sysadmin user or SA Default profile such that it is no longer usable. No installations or deinstallations should be allowed to totally corrupt sysadmin and SADefault in this manner. Note that several test segments have been installed on the system without any apparent error (JMPS, DATAL, ECHO, BRAVO, INDIA0, INDIA1). Installation of Test20, though, failed due to a PostInstall error and did not install. After these installs, JMPS, DATAL, ECHO, BRAVO, INDIA0, and INDIA1 were all deinstalled. Then BRAVO, BRAVOP1, Test20, and Test20P3 installations were attempted, with only BRAVO installing successfully. Despite the Test20 PostInstall error, however, after logging out of sysadmin and rebooting, Test20 and BRAVO items are the only pull-down menu options available upon logging back into sysadmin. It appears that installation and/or deinstallation of one of the test segments is somehow corrupting the sysadmin files.

Workaround: None known. Any profiles based on SA Default will not work.

Also reference GSPR# D70759

INRI Number: RTO30000196

Agency Number: None

Short Description: Phase 2 of JPL's SecMan/Accts&Profiles (integration)

Long Description: Phase 2 of JPL's SecMan/Accts&Profiles (integration). JPL's Accounts and Profiles

software integration into the DII COE for 3.2P2 delivery.

3.3.2.1 DII COE Kernel COTS and GOTS Software Changes Rolled Up from Version 3.2.0.0 Patch 1

The DII COE Kernel Version 3.2.0.0 Patch 2 also encompasses a roll-up of the following changes implemented in Kernel Version 3.2.0.0 Patch 1; these software changes are listed in order of INRI Number.

DII COE Version 3.2.0.0 Kernel Patch 1 (Solaris 2.5.1) COTS and GOTS Software Changes

Total Software Changes: [1]

INRI Number: RTO30000177

Agency Number: D70547

Short Description: When adding a Unix group via the Secman security manager it failed to update the group

NIS table

Long Description: When adding a Unix group via the Secman security manager it failed to update the group NIS table. This was also intermittent.

3.4 Waivers

The following document waivers have been requested since these documents do not apply to the Kernel. References to other documents are provided as applicable below:

- C Software Product Specification (SPS): not applicable.
- C Database Design Document (DBDD): not applicable.
- C Software Requirements Specification (SRS): not applicable.
- C System Administrator's Manual (SAM): See the *DII COE Version 3.2.0.0 Kernel Version 3.2.0.0 Patch 1 System Administrator's Guide*. No software changes affect System Administration.
- C Programmer's Manual (PM): See the *DII COE Version 3.2.0.0 Kernel Patch 1 Programming Guide*. No software changes affect this manual.
- C API Reference Manual (APIRM): See the *DII COE Version 3.2.0.0 API Reference Guide (HP-UX 10.20)*. No software changes affect this manual.
- C Software Test Plan (STP): The STP will cover both Kernel and DTK testing.
- C Software Test Description (STD): The STD will cover both Kernel and DTK testing.
- C Software Test Report (STR): The STR will cover both Kernel and DTK testing.

3.5 Adaptation Data

None.

3.6 Installation Instructions

For instructions on installing this DII COE Kernel patch, refer to the *Defense Information Infrastructure (DII) Common Operating Environment (COE) Installation Procedures for Kernel Version 3.2.0.0 Patch 2.* This patch requires the system to already be loaded with the DII COE Version 3.2.0.0 Kernel.

The DII COE Kernel Version 3.2.0.0 Patch 2 requires 24KB of disk space, in addition to the 151KB already required by the DII COE Kernel Version 3.2.0.0.

3.7 Possible Problems and Known Errors

Refer to the following table for a list of known problems and errors for the DII COE Kernel Version 3.2.0.0 Patch 2 (Solaris 2.5.1).

DII COE Version 3.2.0.0 Kernel Patch 2 (Solaris 2.5.1) Known Problems and Errors

Total Known Problems and Errors: [1]

INRI Number: RTO00002088

Agency Number: None.

Short Description: Can not install patches on a partition separate from the one the affected segment resides on.

Long Description: When installing patches for an affected segment, the Installer does not recognize the affected segment is installed if the patch is being installed on a partition different from the one the affected segment resides on.

Workaround: Install the patch segment on the same partition as the affected segment.

4. Notes

Refer to the *DII COE Version 3.2.0.0 Version Description Document for the Kernel* and *DII COE Version 3.2.0.0 for the Kernel Version 3.2.0.0 Patch 1* for more information about known problems and errors and release notes for the Kernel Version 3.2.0.0 and the Kernel Version 3.2.0.0 Patch 1.

4.1 Kernel 3.2.0.0 Patch 2 Release Notes

The following release note applies specifically to DII COE Version 3.2.0.0 Kernel Patch 2:

C If an HP workstation is a client to a Solaris NIS + master, the AUTOMOUNT option in the /etc/rc.config.d/nfsconf should be set to AUTO_OPTIONS="-m -f \$AUTO MASTER". Otherwise, the HP workstation may have difficulty in booting.

4.2 Kernel Version 3.2.0.0 Patch 1 Release Notes

The following release notes apply specifically to DII COE Version 3.2.0.0 Kernel Patch 1:

- C In order to extend the environment for global profiles with account group types other than Security Administration and System Administration, the .cshrc.{account group prefix} must be referenced by a full path in the account group's .cshrc file. For example, the /h/AcctGrps/SysAdm/Scripts/.cshrc file should contain the line: source /h/AcctGrps/SysAdm/Scripts/.cshrc.SA instead of source ./.cshrc.SA.
- C When running as a global user, applications (from either menus or icons) must be accessible from your workstation or the application launch will fail. For example, if you are logged in as a global user and want to run a particular application, the segment that provides that application should be loaded on your local workstation.

4.3 Kernel Version 3.2.0.0 Release Notes

The following release notes apply specifically to Kernel Version 3.2.0.0:

COE Kernel

- C Installation of the Solaris 2.5.1 Operating System is a *destructive installation* because installation removes any previously installed software. Your disk will be overwritten as part of the installation process and all data will be lost.
- C After a user has three unsuccessful login attempts within a 24-hour period, that user's account will be locked. In order to unlock the account the Security Administrator can run the Unlock Users icon or the root user can run the following command to unlock the account: /h/COE/Comp/CSE/XDM/bin/CSEXDM_clear_failures <username>. Locked users are automatically cleared after 24 hours.
- C When you set up NIS+, you must first ensure DNS is set up.
- C Multi-eye configurations are not supported.
- C Multi-head configurations are supported with one exception. To log onto the second head with a user other than the one logged onto the first head, you must do the following:
 - 1. Open a terminal emulator window on the first head.
 - 2. chmod a+w /tmp/select.display.
- C If you are going to change the machine ID and you have previously set up DNS on your machine, you must make sure your host name and IP address are on your DNS server.
- C When setting the SEG_DIRS variable, each path must be separated by colons ":" not spaces.

- C DCE has been removed from the kernel. It can now be installed as a separate segment.
- C The C2 security level (auditing feature) is running automatically at installation time.
- C In order to add global accounts and profiles, C2 must be disabled. Refer to the *DII COE System Administrator's Guide (Solaris 2.5.1)* for information about disabling the C2 auditing feature.
- C When adding global users, /h/USERS/global on the master system must be exported with rw,-anon=0 permissions via the Disk Manager window. The client system then should mount the master's /h/USERS/global to its /h/USERS/global. Otherwise, a user on a client system cannot log in to a global account created on the NIS+ master. An error message indicates that the home directory cannot be accessed.
- C When exporting file systems as read/write, do not select the option RW. Instead, either clear the options field or select the RW option and specify a machine name; otherwise, the file system will not be exported.
- C Classifications cannot be assigned to profiles.
- C To change the workstation classification, run the COESecLevel tool from the command line. Refer to the *DII COE System Administrator's Guide (Solaris 2.5.1)* for more information about changing workstation security levels.
- C Users cannot print to a specific printer through CDE, although printers can be added and selected as defaults on the CDE icon. Drag and drop functionality works using the Default printer icon, but not with a printer icon configured onto CDE.
- C Users cannot print to a remote printer using the 1p command; however, users can print to a remote printer using the GUI.
- C Users cannot disable the banner page for a printout. When attempting to disable banners for lp, remote, and local printers, print jobs still print out with banners.

COEInstaller Tool

- C The AcctGrp descriptor supports only one entry.
- C The Segment Installation Server and the COEInstaller Network option do not support distribution installations.
- C If the user attempts to install a segment remotely (via the REMOTE toggle in the Select Source window) and the sysadmin account is expired on the machine with the remote tape drive, the installation will fail.

- C If the user selects the OTHER toggle from the Select Source window, then /dev/rmt/Xmnb must be entered as the device instead of /dev/rmt/Xmn, where x is the device number.
- C The Installation Log only logs segment processing for the last segment(s) selected from the current installation.
- C No help options are available from the graphical user interface (GUI).
- C Disk space is not checked on /h/data/global when installing a global data segment.
- C NIS+ and Domain Name Service (DNS) servers are not updated when processing the Network descriptor.
- C The \$HOME_DIR keyword in the Requires descriptor is not processed.
- C If the COEInstaller is run from the command line, the DISPLAY environment variable must be set to unix:0.0.
- C In order for the NETWORK option from the Installer window to work, the /h directory must be exported from the server and /h/data/global must be mounted on the client. If the /h/data/global directory is not mounted, then the Disk Manager must be used to mount the /h/data/global directory. In addition, the machine from which the segments are being installed must be trusted in the target machine's local host file or, if the machine is running DNS, the machine must be in the DNS file.

COEAskUser, COEInstError, COEMsg, COEPrompt, and COEPromptPasswd

C The COEAskUser, COEInstError, COEMsg, COEPrompt, and COEPromptPasswd tools support multi-line text. The following example uses the COEMsg tool to show how to display text over multiple lines while using the C shell:

```
COEMsg "this is line 1 \
This is line 2 \
This is the 3rd line"
```

C The COEInstError process presently does not stop the processing of an installation or deinstallation. It will display an installation error message and return a -1 status code to the calling process. The calling process (i.e., PostInstall) must perform any cleanup to return a failed error \$status of -1 to the COEInstaller, which can then stop the installation.

COEUpdateHome Tool

C COEUpdateHome must be run from within the directory of the script that the user is trying to update (typically the segment directory).

Tactical Battle Management Core Systems (TBMCS)

- C COESegInstall does not support the installation of multiple segments with a single API call. Using the COESegInstall API, aggregates, for example, must be installed using multiple API calls. COESegInstall must be run once to install the aggregate Parent and must be run separately to install each of the aggregate Children.
- C When using SSOProfiles from the command line, unnecessary error and warning messages may appear. These messages can be disregarded. The return status from SSOProfiles should be used to determine the success or failure of the API.
- C The DISPLAY environment variable must be set when running SSOProfiles (that is, setenv DISPLAY:0.0).

Accounts and Profiles

- C Local users may now be simultaneously assigned to local and global profiles. Likewise, global users may have both global and local profiles.
- C Global profiles are now tied to the availability of the NFS mount exporting the global profiles, instead of whether or not NIS+ was running. This allows a local user to have a global profile even if global users are not supported.
- C Assigning a user to a default profile now assigns the user to that profile in addition to using the default profile to establish the user's default UNIX GID.
- C Security Manager support for a Safe Profile has been added.
- C Individual profiles can now be tagged as "lockable" or "non-lockable".
- C In order for profile locking to work, the optional COE component, LDAP, must be installed.